

THE VALUE OF MASSAGE IN THE TREATMENT OF VARIOUS DISORDERS IN CHILDREN.

By JOHN PHILLIPS, M.B.,

ASSISTANT PROFESSOR OF MEDICINE, WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO.

THE purpose of this paper is to call attention to the value of massage in the treatment of malnutrition, rickets, and various other disorders in children. In adults we have recourse to this form of treatment in affections of the heart; in conditions of malnutrition, with flabby muscles, as in the various types of anemia; in convalescence from acute diseases, operations, or parturition; in the treatment of sprains and fractures; in affections of the joints, muscles, and nerves; and in constipation. In children, however, this valuable therapeutic measure has been largely neglected, and yet the results obtained in the majority of cases are better than in the adult. The operator must not only be patient and skilful, but should also have had considerable experience in the nursing care of children. The latter I have found exceedingly important, and I have been fortunate in having had for this work a trained nurse who had several years' experience in the nursing of children before taking up the study of massage.

Many observers have noted the fact that babies in hospitals, but especially in foundling asylums, do not thrive as well after they have reached a certain period in convalescence from acute illness as they do under less favorable circumstances in their own homes. The reason for this is not difficult to determine. In the majority of hospitals the baby is left in the cot all day, often with the bedclothes tucked in so snugly that the movements of the arms and legs are greatly impeded, the respiration and circulation are sluggish, so that he will not thrive so well as if he were picked up at the times of nursing and allowed to move his arms and legs more freely. In some hospitals this "mothering" of babies is considered an essential part of treatment, but usually the inadequate number of nurses prevents it being properly carried out. For babies convalescing from illness in hospitals or homes, or cases of malnutrition, massage is of great value, and excellent results have been reported by MacPhail.

Massage mechanically excites the vessels to action, hastening the circulation and emptying the lymph vessels. Thus the nourishment of the muscle cells is improved by forcing out the waste products and keeping them bathed in a constantly renewed stream of arterial blood. The rate of the heart beat and respiration are slightly accelerated. In fact all the bodily functions are stimulated to increased activity.

The question might well be asked: "Do children not object to

this form of treatment?" This depends largely upon the personality of the masseuse, but in my experience, after the first treatment, the child seems to enjoy the manipulation.

The duration of the treatment should not be more than twenty or thirty minutes, and during the first two weeks should be given daily. Subsequent to this three times a week is sufficient.

It is in cases of malnutrition, with loss of appetite, weak flabby muscles, and distinct pallor that the best results are noted. This is best illustrated by the following case.

M.M., aged twenty-two months, came under observation in July, 1910, and at that time weighed thirteen pounds and eleven ounces. She has been nursed until six months old, and was then given modified milk. At one year she weighted twenty-one pounds. During the next five months her weight remained about the same; her diet consisted of milk, orange juice, cereal, soft egg, broth, and junket, and she showed some growing disinclination to eat. Dentition was normal, and at fourteen months she began to walk. From the seventeenth to the twenty-second month the appetite grew less until she took less than ten ounces of food in twenty-four hours. Her physician made various changes in her diet without any benefit. During the last two weeks before I saw her she had been fed on oatmeal water, but of this she took only a small quantity. As soon as food was offered to her she would "gag" and attempt to vomit. Her face became drawn so that she looked like a withered old woman; she was pale and emaciated and muscles flabby, and there was some edema of feet and hands. The case was considered to be one of anorexia nervosa. During the first six weeks feeding with a catheter was resorted to, using a formula of three parts milk and one part water, and during that time she gained steadily, weighing fifteen pounds and two ounces. She then began to take her milk herself, and by November 10 weighed nineteen pounds and four ounces. She then contracted a severe bronchitis, with high temperature, and gradually lost weight until December 5, when she weighed sixteen pounds and twelve ounces. She took her food poorly, and there was considerable undigested fat in the stools, so that the percentage of fat in her milk was reduced to 2. During the next five weeks there was no gain in weight; her muscles became more flabby, and on January 10, 1912, without changing her diet in any way, massage was started. She at once showed improvement, so that at the end of one month she weighed nineteen pounds and thirteen ounces, a gain of three pounds and one ounce. During the next month she gained four pounds, her muscles became firm, she lost her irritability, and from that time on she thrived, so that now at four years she weighs forty-one pounds.

In another patient, aged ten months, in whom the weight had been stationary for two months, the muscles flabby, and an anemia

present, so that the red blood corpuscles numbered 3,900,000 and hemoglobin 60 per cent., massage was started without making any change in diet. During the first month there was an increase in weight from sixteen pounds and two ounces, to eighteen pounds and twelve ounces, and at one year she weighed twenty pounds and twelve ounces. The red corpuscles at that time numbered 4,850,000, and the hemoglobin was 90 per cent. The most noticeable thing in this case was the increase in the amount of food taken within three days after massage was started.

Great benefit is obtained in the treatment of rickets from massage. In these cases the muscles are flabby, the circulation is sluggish, and the extremities emaciated. Because of the weakened condition the child takes no exercise, and with massage properly given the muscles become firm, the circulation is improved, and the extremities become stronger, so that the child itself will take more exercise. Furthermore, many of the deformities, such as bowing of the legs, can be prevented or corrected.

By massage combined with other exercises I have also seen complete correction of the deformity due to scoliosis before there was little or any change in the vertebræ.

In poliomyelitis after the acute stage has passed, massage has been used with such marked benefit that it is now looked upon as the most important therapeutic measure available for the treatment of the paralyzed muscles. I should like to call attention to its use in the prevention of the spastic contractures in cases of polioencephalitis or other conditions in which there is upper neurone destruction. The following case illustrates this very well:

K. B., aged five years and nine months, first came under observation in September, 1908. At that time, when she was eighteen months old, she had a severe attack of polioencephalitis, with right-sided convulsive twitchings, which kept up for twelve hours, and a temperature of 104°. The next day she had complete hemiplegia of the right side, with aphasia. During the next four days the temperature gradually returned to normal, but the aphasia and hemiplegia persisted. At the end of two weeks, as soon as the sensitiveness of the right arm and leg would permit, massage was started, and has since been continued every morning until the present time, by the mother, who after the first two weeks of treatment learned to give it herself. There was steady improvement, so that at the end of four months she could walk, and there has never been any evidence of spasticity in the right arm and leg. At the present time, with the exception of some of the finer movements of the fingers, she can use the right arm as well as the left, and both the right arm and right leg measure a trifle more than the left.

For a long time massage has been regarded as a useful therapeutic agent in constipation in adults, but seldom do physicians

resort to it in children. From a thorough trial I am convinced that it is just as useful in children as it is in adults.

Another group of cases in which massage is useful is in nervous children. Much can be accomplished by putting them to bed, carefully supervising the diet, and resorting to massage to keep up the nutrition. It is astonishing to see the improvement in a period of two weeks.

In cardiac lesions in children the result of acute rheumatism, the necessity of keeping these cases at rest for many weeks and months, in order to allow the heart muscle to regain its tone, is imperative. These patients will get up much stronger if after the febrile period has passed they are given massage, with first passive and then resisted movements.

Many other conditions might be mentioned where massage is useful, but in general the indications for its use are the same as in the adult, and the results are equally as good.

SOME HEMATOLOGICAL FINDINGS IN PELLAGRA.¹

By O. S. HILLMAN, M.D.,

LECTURER IN PATHOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

INTRODUCTION. The material upon which the following report is based was obtained from cases of pellagra which were sent from the field headquarters of the Commission at Spartanburg, South Carolina, together with slide specimens of pellagrous blood taken from cases in South Carolina and forwarded for study to the New York Post-Graduate Medical School and Hospital during the summer and early fall months of 1912. In spite of the fact that the number of cases under consideration at that time was not large, nevertheless, it seemed advisable to record briefly the most important points in connection with the work that had already been done.

The blood was examined with a view of determining the hemoglobin content, the number of red and white cells per cubic millimeter, the differential leukocyte count, and at the same time the general morphologic characteristics of the blood in stained preparations. A few observations were also made on the coagulation time.

A review of the literature on this particular phase of the hematology of pellagra reveals an agreement of opinion in regard to the presence of a mild degree of secondary anemia of the chlorotic type

¹ This is the first of a series of reports of work performed under the auspices of the Thompson-McFadden Pellagra Commission of the Division of Tropical Medicine, Department of Laboratories, New York Post-Graduate Medical School and Hospital, ultimately to be issued as a complete volume by the Commission.